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On Free Speech and Academic Freedom

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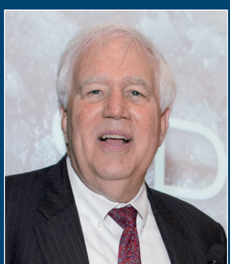
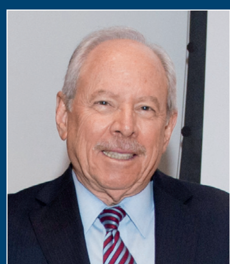
A Reading and Discussion of the Play *Paradise*

Rebecca Saxe, Paula T. Hammond, and Saba Valadkhan





Communicating Science in an Age of Disbelief in Experts

Richard A. Meserve, Mary Sue Coleman, Alan I. Leshner, Joe Palca, and Matthew P. Scott

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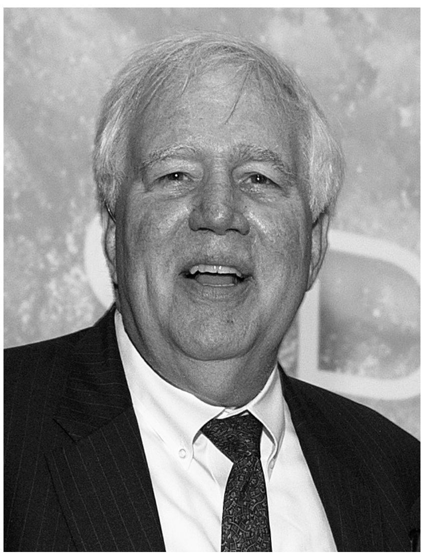
Communicating Science in an Age of Disbelief in Experts

On May 18, 2017, the American Academy, in partnership with the Carnegie Institution for Science, hosted a meeting at the Carnegie Institution in Washington, D.C., on "Communicating Science in an Age of Disbelief in Experts." The program, which served as the Academy's 2055th Stated Meeting, included presentations by **Mary Sue Coleman** (President, Association of American Universities), **Alan I. Leshner** (Chief Executive Officer, Emeritus, American Association for the Advancement of Science), **Joe Palca** (Science Correspondent, National Public Radio), and **Matthew P. Scott** (President, Carnegie Institution for Science). **Richard A. Meserve** (Senior Of Counsel, Covington & Burling LLP; President Emeritus, Carnegie Institution for Science) moderated the program, which included introductory remarks by **Jonathan F. Fanton** (President, American Academy of Arts and Sciences). The following is an edited transcript of the discussion.



Richard A. Meserve

Richard A. Meserve is Senior Of Counsel at Covington & Burling LLP and President Emeritus of the Carnegie Institution for Science. He was elected a Fellow of the American Academy in 1994 and serves on the Academy's Council and Trust.

Although the public thinks highly of scientists, there are many issues in which there are very stark differences between the perspectives of the scientific community and those of the general public.

The subject of our discussion tonight is the challenge of communicating science in an age of disbelief in experts. Many of us in this audience recognize that there are public and personal issues in which scientific facts and scientific information should be at the core of sound decision-making. But we have some challenges in providing accurate scientific information in a way that the public accepts and then applies when making choices. Fortunately, data on public attitudes collected by the Pew Research Center show that the American public holds scientists in very high regard. The only sector that is held in higher regard is the military. And as you might expect, politicians are at the very bottom of the list.

The paradoxical thing is that the Pew Research Center's evaluations of public attitudes show that there is a gulf between what scientists understand about certain issues and what the general public thinks about them. We all know about the gap between scientists and many members of the public on climate change and the safety of vaccines. There are also very different attitudes about the safety of genetically modified organisms and genetically modified crops, the use of animals in research, and a whole variety of energy-related issues. Although the public thinks highly of scientists, there are many issues in which there are very stark differences between the perspectives of the scientific community and those of the general public. The differences in many instances are correlated with age, gender, political party (as you might expect), ethnicity, educational attainment, or wealth.

One of the challenges we confront is that when people in the scientific community try to engage with the public, we sometimes observe a "boomerang effect": the speaker may express an accurate consensus of the scientific view on something like climate change, and the perspective of the person who is listening, and who disagrees, becomes stronger as a result of that interaction. There is not a true dialogue, and therefore communication provides little possibility for convergence.

So we have some real challenges on how the scientific experts should engage with the public. We are going to explore that tonight.

Communicating science has never been easy, but in today's world of the Internet and 24-hour news cycles, the issues are more distinct and the audience is more fractured.

Mary Sue Coleman

Mary Sue Coleman is President of the Association of American Universities. She served as President of the University of Michigan from 2002–2014 and as President of the University of Iowa from 1995–2002. She was elected a Fellow of the American Academy in 2001.

I am not sure that we really are in a new age of disbelief, since we have long had a challenge communicating science and its inherent uncertainty. We know that what we believe may be subject to change as we discover new things. But it is especially challenging with newly emerging insights about individual belief systems, and how these affect the acceptance of scientific evidence. In an influential paper that came out in 2012 in *Nature Climate Change*, Yale psychologist Dan Kahan and his colleagues found that beliefs about climate change risk were not positively associated with science literacy or with a measure of numeracy. Rather, beliefs about climate change were largely determined by the values of the community with which people identified. Perhaps these kinds of studies and others can give us clues about how best to communicate. Communicating science has never been easy, but in today's world of the Internet and 24-hour news cycles, the issues are more distinct and the audience is more fractured.

So I prefer to believe that we live in a more pronounced age of disbelief. And my own experience about this is telling. While I was president of the University of Michigan, I found that people were willing to listen and learn about difficult emotional matters related to science. Midway through my presidency, in 2008, the state of Michigan was confronted with a ballot initiative to change the state's constitution to permit embryonic stem cell research. If enacted, this amendment would have reversed an existing ban that was based on a poorly worded section of the constitution written in the 1970s to outlaw fetal tissue research.

As a university, we believed that it was crucial for policy-makers, the news media, and the public to educate and inform themselves about embryonic stem cell research so that they could be full participants in this important public policy debate. As one of the top research universities in the country, U-M was obligated to play a central role in public education about the science underlying the research. We were fortunate to have the support of a deeply committed philanthropist, who gave millions of dollars to help us disseminate educational materials.

We explained in lay terms the science of embryonic stem cell research and the medical benefits that might accrue. We always discussed the ethical dimensions of embryo donations to emphasize that this must be an individual, informed decision. And we made each discussion relatable to a human experience. We developed a comprehensive website that included a simple but informative tutorial on stem cell research. We held day-long workshops for journalists to explain the science, explore the ethical questions, and review the legal and political landscape. We explained how the research holds great promise in treating serious diseases such as diabetes, Parkinson's, certain cancers, and Alzheimer's disease. I am sure that there is hardly a person in our audience who has not been affected in some way by one of these diseases.

We also stressed the economic impact of life sciences research. Remember this was in 2008, and the state of Michigan at the time was ground zero for the recession, so the state had a lot to lose in this arena. We had invested significant resources to develop a thriving life sciences industry, but those efforts were at risk if the scientists in the state could not pursue the promising avenues of research. We were already losing our auto workers to other states and did not want to add highly educated scientists to the list. Again, people could really relate to this potential risk. They understood it. But we also acknowledged the opposition to embryonic stem cell research and that the decision confronting voters was deeply personal. So we did more than simply talk about the science.

I am pleased to say that Michigan voters approved the amendment and thus the ability of researchers to use embryonic stem cells in investigating fundamental developmental issues. I would never point specifically to the university's work, but I do believe that educating the public was important and ultimately influential.

The debate really brought home to me why we need to be concerned about science education for nonscientists. And there is some positive news about how higher education institutions can help promote science literacy. At the University of Michigan, researcher Jon D. Miller directs the International Center for the Advancement of Scientific Literacy at the Institute for Social Research. Civic science literacy is the ability of people to understand and use scientific or technological information in public policy discussions and decisions, which is really key to our democracy. Our civic scientific literacy stands now at about 28 percent in the country, and that is based on a straightforward eleven-question science facts test. And it has been at that level for about the past decade.

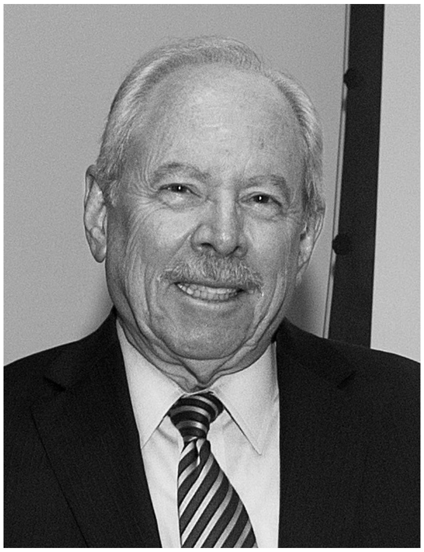
College-level science courses are critical to building civic scientific literacy, particularly among nonscience majors. The United States happens to be the only nation whose universities require students to take at least one science course as part of their general education curriculum.

Professor Miller finds it troubling that the number has been so stagnant, yet one bright spot is that college-level science courses are critical to building civic scientific literacy, particularly among nonscience majors. The United States happens to be the only nation whose universities require students to take at least one science course as part of their general education curriculum. Professor Miller's research shows that exposure to these courses builds civic scientific literacy. I think department chairs and deans should take seriously these science courses for nonscience majors. University scientists should realize a science course for nonmajors may be the last time they have a chance to talk to future senators or congresspeople about science before they are elected to office. And it may be the only chance scientists have to talk to the country's newest voters.

It is becoming increasingly important that we need to understand our audiences better: their beliefs, their backgrounds, and their traditions. As I indicated earlier, we are facing a lot of complexities when trying to reach people. Here the work of Skip Lupia, a political scientist at Michigan, is particularly insightful. He makes the point that much of the science information that is conveyed to policy-makers and the public is ignored or misinterpreted because of two challenges. First, people have less capacity to pay attention to scientific presentations than is generally understood. And second, people in politicized environments often make different choices about whom to believe than do people in other settings.

Skip posits that research about attention and source credibility can help scientists and science communicators adapt to these challenges. Some critical factors, for example, are being memorable in the presentation and believable as a presenter. We live in a visual era. NPR has learned this with its *Shots* health blog: visuals matter. When comparing the blog's posts that featured original art with those that had clipart or no images at all, the posts with original images had 160 percent more page views. NPR's response? Increase the budget for photography, videos, GIFs, and other animations. And this is from a radio network. At Harvard, the media relations team is using Facebook Live to provide behind-the-scenes tours of laboratories. The quality may be lacking, but the authenticity is not.

Perhaps we as educators need to adjust our attitude about communicating science. A 2016 survey of members of the American Association for the Advancement of Science asked scientists about their objectives in communicating with the public. Their number-one priority: defending science. That was followed by informing others and exciting them about science. The lowest priorities were building trust and tailoring messages to the audience. I found that sad and a little troubling. Maybe our thinking should be reversed. The highest priority should be exciting people about science, and then working to gain their trust. If we approached communications that way, and if we thought more about our audience, would defending science become less a priority? Maybe.



Alan I. Leshner

Alan I. Leshner is Chief Executive Officer, Emeritus, of the American Association for the Advancement of Science and former Executive Publisher of the "Science" family of journals. He was elected a Fellow of the American Academy in 2005.

Society's need for science communication has never been greater. And effective science communication is both complex and a learned skill, especially when the science relates to controversial issues.

I have subtitled my remarks "Communicating Science Effectively," and I am going to talk about two things: one, what I have learned after forty-some years trying to communicate science with the public; and two, what we learned during a recent committee I had the pleasure to chair for the National Academy of Sciences on communicating science effectively. I, like Dr. Meserve and Dr. Coleman, am a little uneasy about the title of our program since it is not clear to me that we are in a special age of disbelief, although I will say that the level of tension between science and the rest of society feels to be at its highest, at least in my scientific lifetime.

Let me highlight some of the data that Dr. Meserve referred to. In terms of public confidence in institutional leaders, the scientific community is the second-most respected behind the military. The press and the Congress are at the bottom of the list. The other data point that Dick made reference to is that no matter what, the public remains largely positive about the contribution of science to the rest of society.

Now, it is true that we do have, at the moment, a large number of science-related issues that are controversial. Some are controversial within science itself; others are controversial within the broader society. And controversy, of course, can lead to or undermine the influence of science, which in turn can create tension and disbelief. Now, my view is that most controversy comes from conflicts with things that are either economically convenient, politically convenient – which are often also economically convenient – or are core human values and norms. My own sense is that the issue around climate change is really one of economics: "It is expensive to fix the climate, and I don't want to spend that kind of money."

Some current scientific issues that abut against core values include embryonic stem cell research; studying "personal" topics, such as sex; teaching evolution in science classrooms; the origins of the universe; synthetic biology; and neuroscience (meaning mind/body issues). The objection to embryonic stem cell research has nothing to do with whether people believe that, in fact, it will lead to better diagnostics or better cures. The objection to embryonic stem cell research has to do with when you believe life begins.

Now, the problem here is that we cannot actually "educate" our way out of this tension between science and society. The problem is not just a lack of understanding. People do, in many cases, understand what is going on, and they don't like it. The conflict with their core values and beliefs trumps their view of the societal benefits. The following may be the most important thing I am going to say: only scientists are stuck with what science says. The rest of the public can disregard, deny, or distort the findings with relatively little immediate consequences. Yet if I violate a scientific fact, I will be struck by lightning and lose my scientific credibility.

Let me give you a very quick anecdote. I had a good friend, who was a physicist, and one night at dinner he said to me: "Climate change, not true." I went into my speech on climate: "Ten thousand studies, converging evidence, 97 percent of the scientific community agrees." And at the end he said, "You know what? I just don't believe it." And he did not get struck by lightning.

Anyway, what we learned is that we have to do more and a much better job of communicating science with the public. This led to the National Academies study that I chaired on *Communicating Science Effectively*. The purpose for the report, I think, is obvious. Society's need for science communication has never been greater. And effective science communication is both complex and a learned skill, especially when the science relates to controversial issues. The charge to our committee was as follows: What is now known about effective science communication? What additional research might make science communication more effective?

We came up with several cross-cutting themes: One, align the communication strategy with the goals (that is, know what you are trying to accomplish) – share the findings and excitement of science; increase the appreciation for science; increase the knowledge of a specific issue; influence the opinions or behavior of the public; and consider the public perspectives and find common ground. Two, what we call the "deficit model" is wrong. Many people, particularly scientists, believe if we just communicated better, everything would be all right – people would make choices that are more consistent with the scientific evidence. And the truth is that is not going to happen. People rarely make decisions based only on science; they consider their own goals, knowledge, values, and beliefs. Three, it is difficult to communicate science because scientific information can be complex and uncertain; people process information in diverse ways; and social influences, such as social networks, communities, norms, and loyalties, are very powerful. Four, "mental models" turn out to matter. When interpreting new information, people tend to draw on their own beliefs about the world. They use their own analogies, metaphors, and prior experiences. They also are assessing the communicator's values and motivations.

How the issue is "framed" is critical in communication. How you talk about a subject is vitally important. One takeaway word from my presentation is "glocal." People care about things that matter to them personally or locally. Therefore, the issues have to be communicated in a way that is personally meaningful to the audience.

As we have alluded to already, today's media environment is competitive and complex, fragmented and fast paced. There are many voices competing for attention, and you have to figure out how to include accurate scientific information in those conversations. "Public engagement" with science is different from just communicating about science to the public, and what the data are showing is that engaging formally with the public works. But it is a different model; we are changing not only the style and content but also the intent of the conversation – changing from a monologue to a dialogue with the public, and Dr. Coleman made reference to that. Yet effective public engagement is not easy: many scientists are not prepared to talk about their work with the public, and listening to and respecting public concerns can sometimes be difficult for scientists.

People rarely make decisions based only on science; they consider their own goals, knowledge, values, and beliefs.

In-person engagement works best and there are a variety of ways of doing it. "Over the neighbor's fence" is actually my favorite, but working in groups works well as do hands-on exhibits or demonstrations, lab visits, science camps, museums, science fairs, and science cafés. The data show that town meetings and big public lectures do not work, so don't bother with them. We are learning more about what works (and doesn't work) in science communication. It is an acquired skill, and one of the good things is there is a rising evidence base (the science itself) that can help us do it better.

People need to become more familiar with what science is, and not hear about the science from the experts. And so I am very encouraged by these nontraditional communication methods of "over the neighbor's fence," or "science cafés" and "science bars."

Joe Palca

Joe Palca is a Science Correspondent for National Public Radio.

One thing I have heard this evening from both Mary Sue and Alan is that communicating science is difficult. But I have always found it easy, or not as hard as people make it out to be. Many people think that part of the problem may be educating the public. But there seems to be this implicit suggestion that the public will believe whatever it wants to believe, and so don't think that by educating them you are going to get them to change their belief structure. I personally do not think it is an education problem, but I agree with Mary Sue and Alan that we are not living in an age of disbelief in experts. I think that the people who tend to disbelieve in the experts have been validated by some leaders of our country recently, and maybe that is the problem.

But in the end, people make decisions for reasons other than their clarity, or lack thereof, of the scientific issues. To me, embryonic stem cells are one of the great examples of this. You could talk until you are blue in the face about educating the public about embryonic stem cells, but if they believe that life begins at conception, then it is a nonstarter. No amount of education is going to change their belief system.

And that is one of the things that I find so discouraging. I hear people on both sides of the debate: "Oh, it's just a collection of cells." Well, excuse me, but so are the cells I shave off in the morning when I use my razor. They are *just* a collection of cells. It makes a difference whether they are capable of going on to form an entire human being or not. Now, of course, when you get to cloning and you can make an entire human being from the cells that you shave off of your face, that makes the whole thing much more complicated.

Let's say we live in an age in which it is important to become better communicators. Well, what does it mean to be a good communicator? If you are getting paid to be a communicator, then that is one good way of telling. Another is if you are awarded prizes from other communicators, but in the end, what do they know? They live in the same bubble that I am in. We think we are doing a good job because we did just what we thought we should do. But it doesn't get you very far.

So what should we do? Well, let's say the National Academies report on *Communicating Science Effectively*, which Alan chaired, provides us with a series of very clear steps of how to become better communicators. I can tell you that we in the media – even the science correspondents – will ignore it. We think we know better, and a bunch of scientists cannot tell us what to do. And that is the reality. I have worked in media for thirty years; I have a science background. I was shocked that when people made decisions about what to cover in the media, they didn't rank the stories on their importance. It was haphazard and hard to decipher. It is particularly difficult when it comes to science stories, because nobody knows what is really important in science.

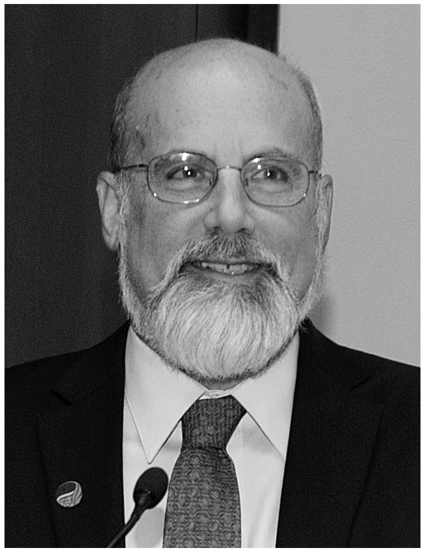
Another thing that always bothers me is that I do not have any way of knowing whether I am a good communicator. The people who study what I do never tell me if I am doing anything wrong. People have written articles about the way I frame stories, but I couldn't tell you how I do it. So I would love to have these people come back and tell me what to do.

I fundamentally agree that people need to become more familiar with what science is, and not hear about the science from the experts. This is one of the things that is causing a lot of trouble: we tend to put all our hope into an expert explaining something. And so I am very encouraged by these nontraditional communication methods of "over the neighbor's fence," or "science cafés" and "science bars." Now to that end, I have started something new: "Joe's Big Idea," which is a series that explores the mind and motivations of scientists and inventors.

I have also decided to reach out to young scientists, to ask them to help me with my Facebook page. I created this thing called "Friends of Joe's Big Idea," or "FOJBI."

FOJBI are graduate students who are interested in becoming better science communicators. We now have four hundred FOJBIs all over the country, sharing ideas about best practices for engaging with people about science. And I think that is where the hope is because these people have parents, cousins, and friends, and they want to spread the word not to the believers – the individuals who go to the science museums or come to presentations at the Carnegie Institution – but to the people who just aren't into science but might be if they were told science stories in an interesting way.

And so my little contribution to this world is these FOJBIs, and I think they are going to make a big difference, but we may never know because nobody measures that.



Matthew P. Scott

Matthew P. Scott is President of the Carnegie Institution for Science. He was elected a Fellow of the American Academy of Arts and Sciences in 1996.

When I see a person who routinely produces extraordinary art, I am always curious how he or she does it. People are curious about how someone makes a discovery, has an adventure, and so on. If you watch a video of Mark Morris working with Yo-Yo Ma to put a Cello Suite to a dance, or you watch a video of Andy Goldsworthy creating his sculptures, it is incredible to see the process. What are they thinking about? Where does their inspiration come from?

And so for scientists, when we think about engaging the public, that is the kind of thing we ought to do. We ought to bring them along with us. Unfortunately, we usually set up all sorts of obstacles in how we communicate by making things seem boring, esoteric, stagnant, and the like.

But we have examples of things that work. For example, make your presentations visually interesting. For instance, in a talk about transposons (jumping genes), you should

People are curious about how someone makes a discovery. . . . What are they thinking about? Where does their inspiration come from?

show things jumping. One of the interesting things in evolution is often illustrated by a diagram that portrays how genes might jump between organisms, what we call horizontal gene transfer or lateral gene transfer. Through this process, you could have an acceleration of evolution, in which genes that are invented, essentially, by one organism get transferred to another.

So how do we destroy our communication efforts? We start with titles that say nothing and that are dull. For example, "Studies of a . . . ." But if you play with the words and add visuals, you can start to get people's attention.

One thing you don't want to do is to show a lot of lines of text that are animated one by one on the screen. You should also avoid extraneous text and reading the slides that people could read for themselves. Do you want people to read the text or to listen to your presentation?

And you want to use the simplest diagrams to show your data, which you can explain very quickly.

Now your presentation can foster some debate, for instance, nature versus nurture, which is not a simple question and does not offer a simple answer. You could use a mystery to tell the story and use historical drama that grabs people's attention. You can be upbeat in the face of grim history; you can point out that there are relatively simple solutions to some problems, like a vaccine for the flu, for example.

Discussion

Richard A. Meserve

Well, I want to start off by apologizing to the Academy for the title of this program. My fellow panelists have questioned whether we live in an unusual age of disbelief in experts. I should explain that we wanted a title that would grab people's attention. I came up with "Communicating Science in an Age of Disbelief in Experts." It sounded profound. And its purpose was to try to draw a big audience. Fortunately, it did.

Let me start off the discussion with the assertion that has been made by several of our speakers about the difficulty of communicating science when the scientific information conflicts with the recipient's belief system. When you have that conflict, the capacity for the scientific information to have much effect on a person's views is actually very slim. But I think we may be making a mistake by lumping a series of issues together. It may be true that issues like stem cell research and evolution can impact a belief system directly. Yet there are many issues where it is not so obvious that a belief system would be affected. The safety of vaccines or of GMOs may not threaten a belief system. Climate change perhaps is another in which the controversy does not so much arise from a conflict with a belief system, but rather is impacted by economic and political considerations. So we may be making a mistake by lumping together a variety of different challenges in analyzing the gulf between scientists and the public.

Alan I. Leshner

So that is a part of the complexity that is called "know before whom you stand." If you want to find common ground, you need to start by listening, but listening is not an innate skill for scientists. Scientists are really good at talking. And at least in my experience and in the studies that I have looked at, if you really want to find this common ground, you have to truly engage with the public and have a meaningful dialogue.

Mary Sue Coleman

So I agree with that, but I disagree with Joe that if people have a belief system, they cannot change. One of the things that we found at Michigan with the embryonic stem cell research, when we put it in the context that these were embryos that were going to be destroyed, was that people could have a choice – it was like donating an organ after death. The decision was totally up to the individual parents who had created the embryo. What we were particularly interested in doing, because nobody had done it yet, was creating cell lines from embryos that had defects because that would actually be helpful to the research. So these were never embryos that could be used to create life. We found there were ways to talk in very simple terms to people about what's going on. We understood that some people would never agree; and that was fine. But we never stopped looking for a way to find common ground. And I think that is what we need to do, especially with issues that are emotionally highly charged.

At least in my experience and in the studies that I have looked at, if you really want to find common ground, you have to truly engage with the public and have a meaningful dialogue.

Audience Question

I have been involved in teaching undergraduate nonscience majors for several decades. One thing that we don't really focus on has to do with the larger academic community. If we were to ask people in this room, "Have you ever read a work of Shakespeare?" and your answer is no, I think there would be some feeling that your education was lacking. But at the same time, if we asked, "What do you think about the second law of thermodynamics?" or "How do you feel about modern plate tectonics?" historians, philosophers, and people in the arts would say, "Oh, I don't really know much about science." To me, asking "What do you think about the second law of thermodynamics?" is analogous to asking "Have you read a work of Shakespeare?" Why do we think it is okay if you are not a scientist to be less informed about basic science knowledge?

Mary Sue Coleman

In this country, most universities have a science requirement for nonscience majors. So as a nation, we have tried to ensure that everyone has a general science education. But we may not be serving the nonscientist as well as we should be.

Alan I. Leshner

I have a slightly different take on this. I am not sure it really matters for the big public to understand that there is a second law of thermodynamics. I discovered many years ago that, in fact, nobody would fall off the Earth if they didn't understand that law.

Science education focuses too much on individual facts; it is much more important for the general public to have an understanding of the process.

And the truth is that all the studies that have been done about what has not worked in science education have shown not that the public doesn't understand individual facts, or even individual theories, but they don't understand the nature of science, they don't understand the nature of the enterprise, and in order to function in the modern world, that is what they need. So I would put the question somewhat differently: what is it that we want to educate people about? What do we want to communicate to them?

Richard A. Meserve

Let me just note that there was a recent editorial in *Science* magazine by Bruce Alberts that made the point that science education focuses too much on individual facts, and that it is much more important for the general public to have an understanding of the process. That is, we should teach what it means to try to get evidence and draw conclusions from evidence. We should explain how scientists revisit issues as time goes on based on new evidence and how that expands our understanding. Making science an accumulation of facts discourages people from really understanding what the scientific enterprise is about.

Audience Question

Why do you think that the public, while it respects scientists, still does not accept what they say?

Matthew P. Scott

I think part of it is that many people do not have an opportunity to try out the scientific process for themselves. Let me give you an analogy. When you build something as a kid, when you actually assemble something – whether you copy it from somewhere or invent it on your own – you realize you can change something, you can create something, and that experience gives you a sense of comfort, self-confidence, and fulfillment. I think there are not enough people having that experience with the scientific process. They are not asking a question without knowing what it says in the textbooks. Imagine saying, "I wonder how this works?" I am a geneticist and we break stuff. We break one gene at a time to see what may go wrong. We don't always understand how things work; we just find out that this gene is necessary for that purpose. And you could work on cars in the same way. You wouldn't be paid very much, but if you disconnect this wire, you can find out what stops working. Having those kinds of experiences, where you are tracing what is wrong with a car by a series of scientific deductions – it's not this because I tried that, and that didn't work – goes a very long way to making the whole process seem more sensible. ■

To view or listen to the presentations, visit https://www.amacad.org/disbelief-in-experts.